## Polynomial Factoring EXAM (version 603)

1. The quadratic formula says if  $ax^2 + bx + c = 0$  then  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ . Use the quadratic formula to solve the following equation.

$$x^2 - 2x + 28 = 0$$

Simplify your answer(s) as much as possible.

2. Express the product of -2 - 8i and -4 - 6i in standard form (a + bi).

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3. Write function  $f(x) = x^3 + 2x^2 - 9x - 18$  in factored form. I'll give you a hint: one factor is (x-3).

4. Polynomial p is defined below in factored form.

$$p(x) = -(x+4)^2 \cdot (x-1)^2 \cdot (x-6)$$

Sketch a graph of polynomial y = p(x).

